Seizing Opportunity at the Top

How the U.S. Can Reach Every Student With an Excellent Teacher

by Bryan C. Hassel and Emily Ayscue Hassel

PUBLIC IMPACT

WORKING PAPER

About the Authors

BRYAN C. HASSEL is Co-Director of Public Impact. He consults nationally with leading public agencies, nonprofit organizations and foundations working for dramatic improvements in K–12 education. He is a recognized expert on charter schools, school turnarounds, education entrepreneurship, and teacher and leader policy. Dr. Hassel received his Ph.D. in public policy from Harvard University and his master's degree in politics from Oxford University, which he attended as a Rhodes Scholar. He earned his B.A. at the University of North Carolina at Chapel Hill, which he attended as a Morehead Scholar.

EMILY AYSCUE HASSEL is Co-Director of Public Impact. She provides thought leadership and oversight to Public Impact's work on teacher and leader policy, organizational transformation, and emerging opportunities for dramatic change in pre-K to grade 12 education. She previously worked for the Hay Group, a leading human resources consulting firm. Ms. Hassel received her law and master's in business administration degrees from the University of North Carolina at Chapel Hill.

About the Series

This report is part of the series *Building an Opportunity Culture for America's Teachers.* To see all reports in this series, please visit www.opportunityculture.org.

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Public Impact is a national education policy and management consulting firm based in Chapel Hill, NC. We are a team of researchers, thought leaders, tool-builders, and on-the-ground consultants who help education leaders and policymakers improve student learning in K-12 education. For more on Public Impact and our research, please visit: www.publicimpact.com.

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This is a working paper. The authors invite comments and contributions to developing and implementing the recommendations presented in this paper, at opportunityculture input@publicimpact.com

Seizing Opportunity at the Top

How the U.S. Can Reach Every Student With an Excellent Teacher

Working Paper

by Bryan C. Hassel and Emily Ayscue Hassel

Introduction

American children deserve the one ingredient we know creates stellar learning results: excellent teachers. These teachers produce *well over* today's typical year of learning growth. Without them, even with solid teachers who produce a full year of progress, children who start behind stay behind, and few students get ahead of their beginnings—the antithesis of the American Dream.

In contrast, if our nation consistently provides students with excellent teachers, we could close most of our stubborn achievement gaps in just five years, and help many children leap ahead of today's standards.

This report explains why every child needs excellent teachers year after year, how the nation can now meet that need at unprecedented scale by reaching more children with excellent teachers, and what changes policymakers must support to make this possible.

First, policymakers can speedily ***improve the identification*** of excellent teachers; we explain how.

Second, policymakers can ***clear the policy barriers*** that keep excellent teachers from reaching more students for more pay. We outline new policies that would clear these barriers.[2]

Third, and of paramount importance, policymakers can ***catalyze the will*** for schools and districts to put excellent teachers in charge of every student's learning. We propose bold solutions to create this will, and we invite others to add to these ideas. Without will-enhancing actions, other policies and education changes will continue to fall short of their potential effects.

Excellence for all students must become the new goal, and it is entirely within reach if our nation's schools offer new opportunities for excellent teachers to lead the way.

A summary of this report is available in *Seizing Opportunity at the Top: How the U.S. Can Reach Every Student with an Excellent Teacher: Policy Brief*, available at http://opportunityculture.org/seizing_opportunity_policybrief-public_impact.pdf.

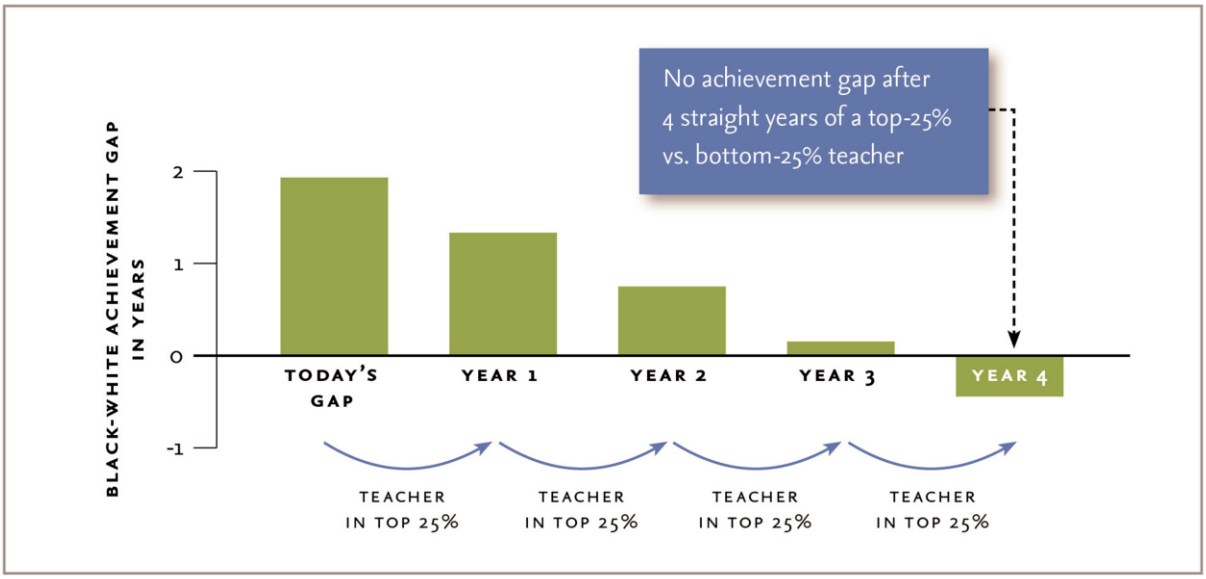
Why We Must Build an Opportunity Culture for America's Teachers

3X for All—Excellent Teachers for Every Child, Consistently

Without excellent teachers year after year, children who start out behind simply can't catch up. On average, children with excellent teachers—those in the top 20 to 25 percent today—make approximately three times (3X) the progress of children with teachers in the bottom 20 to 25 percent.[1] We call those excellent teachers, who produce well over a year of progress in their students each year, "3X" teachers, and every child needs them—not just once every four years, but consistently.

What difference does the consistency make? Children who start out *one year behind* their peers can catch up—*if they have an excellent teacher two years in a row*. Children who start out *two years behind* can catch up—*if they have an excellent teacher four years in a row*.[2] As Brookings Institution researchers concluded in 2006, "having a top-quartile teacher rather than a bottom-quartile teacher four years in a row would be enough to close the black-white test score gap."[3] But without those *excellent* teachers, children who start out behind are likely to stay behind, even with solid teachers who produce a year of progress each year.

Figure 1. Effect of Having Excellent Teachers on the Black-White Achievement Gap[4]



This graphic illustrates the effects on black students of having a top-quartile teacher rather than a bottom-quartile teacher for four consecutive years. The distribution of teachers for white students remains the same as it is today.

As things stand, then, students who enter school on track stay on track, but most students starting behind stay behind, while those who enter ahead stay ahead. Overall today, U.S. students end up pretty much where they started out in life, the antithesis of the American Dream.

With excellent teachers, though, we can get children up to speed, and more: Children who start out at grade level leap further ahead, looking like their "gifted" peers, every year they have an excellent teacher. And children who were given the chance to catch up from behind leap further ahead—like those "gifted" peers—every year they have an excellent teacher.

In other words: **With excellent teachers, we can not only close our gaps—we could move toward being a whole nation of high-achieving children**.

In recent years, U.S. reformers have focused on recruiting and retaining more top talent, dismissing low performers, and professional development. All of these are essential tasks for the U.S. education system. But according to our projections, even *significantly* better recruiting, professional development, low-performer dismissal, and high-performer retention will not put an excellent teacher in every classroom.[5] Moreover, retaining more higher-performing teachers appears unlikely until more career advancement opportunities are available within instructional roles. All of these strategies are becoming increasingly difficult to implement in a time of crushing budget deficits in K–12 education.

We simply cannot pay top teachers more or offer them real career advancement using our current ways of organizing teachers' work.

In our reports *Opportunity at the Top* and *3X for All*, we proposed a new strategy that, along with a broader set of talent strategies, has the potential to close most of the top-teacher gap within existing or reduced per-pupil revenues: **extending the reach of the best teachers** so that they affect more children.[6]

Reach Extension Explained

How can schools extend top teachers' reach without diluting their learning results? As we first explained in *3X for All: Extending the Reach of Education's Best*, job redesign and technology—both to free teachers' time and to expand top-teacher reach through digital instruction—are essential ingredients. We expect that excellent teachers themselves and other innovators will devise many methods. For updated reach extension models and real examples that we will post as they become available, see www.OpportunityCulture.org/reach.

How reach extension can work:

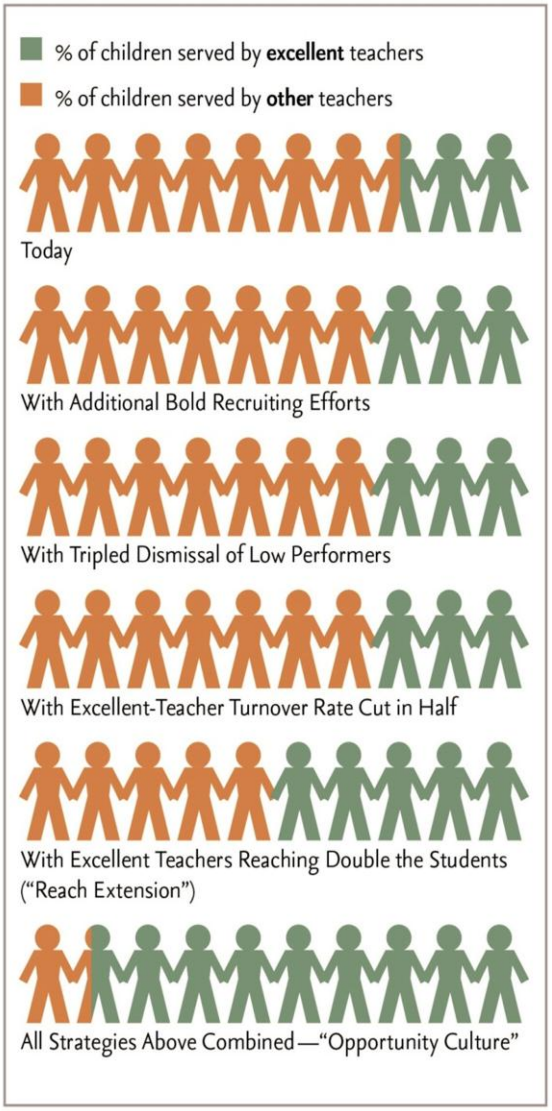
***In-Person Reach Extension* involves changing instructional roles and how schools are organized to allow the greatest use of excellent teachers while keeping them in the classroom**. Examples include having excellent teachers specialize in their best subject areas while reducing noninstructional duties so they can teach more classes effectively; choosing

excellent teachers with managerial skills to lead multiple classrooms, in which other teachers follow and learn from the excellent teacher's methods and standards; and allowing these top teachers to voluntarily shift more children into their classrooms (reducing class sizes for other teachers). In-person reach extension could increase the number of students with access to top teachers by 10 to 300 percent, in many cases *without diluting in-person instruction time or increasing group size.*

Remote Reach Extension **means using technology to enable excellent teachers to engage directly (though not in person) with students, bringing top teaching to places that lack sufficient local talent.** With remote reach extension, schools could offer courses by excellent teachers who interact personally with students via email and web cameras. Excellent teachers could work from home or live where they want to live, but still teach the students who need them most. Remote Reach Extension could double or triple the number of children taught by excellent teachers, and it could do so where In-Person Reach Extension is not feasible.

Boundless Reach Extension **involves using digital recordings of excellent teachers and software based on their insights and practices to deliver top teaching** even when top teachers are not available in person or remotely. Examples include video and holographic recordings of teachers who are both masters of content and engaging performers, and smart software designed to mimic the way excellent teachers ascertain and respond to each student's level of skill and knowledge.[7]

Figure 2. Proportion of Children Served by Excellent Teachers—Today and in an "Opportunity Culture"



For an explanation of the data and calculations underlying this figure, see Hassel, B. C., & Hassel, E. A. (2010). *Opportunity at the top: How America's best teachers close the gaps, raise the bar, and keep our nation great: Executive summary*. Chapel Hill, NC: Public Impact, p. 1.

Combined **modes of reach extension present even more opportunities for effectively extending the reach of excellent teachers.** For example, "time-technology swaps" substitute a portion of excellent teachers' time with computer-based knowledge and skill instruction, allowing excellent teachers to reach 33 to 100 percent more students with enriched and

personalized portions of instruction without increasing group size. Combining time-technology swaps with subject specialization can increase the number of children taught by the best teachers even more.[8]

The Consequence: A Nation of High-Achieving Students

Using reach extension, we estimate that our nation could double the number of students successfully taught by excellent teachers each year. After five years of combining the strategies of high-performer reach extension, recruitment, and retention, coupled with low-performer dismissal, nearly 87 percent of the nation's classes could be taught by excellent teachers, up from 25 percent today (see Figure 2). At any one time, some 46 million students would be taught by excellent teachers, compared with just 13 million if current trends hold.[9] The normal, expected experience of a student would be to have a truly great teacher—the kind that today most students have only a few times in a whole school career. In other words, our nation could achieve "**3X for All**"—top-level learning gains for nearly every student, every year.

The Opportunity Culture Virtuous Cycle

To achieve 3X for All, public education needs to offer a dramatically different bargain to its best teachers, what we call an Opportunity Culture. For teachers, an **Opportunity Culture** means "career and reward opportunities in proportion to my contribution to learning *times* the number of children I reach—without taking me out of instructional roles." For students, an opportunity culture means access to teachers who consistently produce high-progress learning, over time enabling excellent, not just adequate, achievement for far more students.

Currently, top teachers can advance in their careers only by stepping out of the classroom, into administration or a limited number of support roles. In an Opportunity Culture, they still have those options, but they can also choose to advance by reaching more students with excellent instruction. An Opportunity Culture offers a variety of potential reach extension roles for top teachers with differing competencies, providing multiple routes to sustainable, paid advancement.

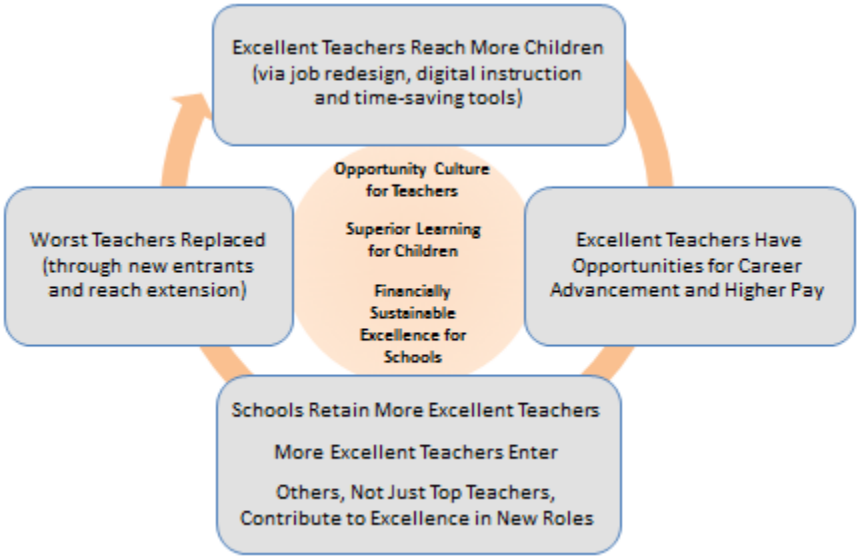
Reach extension is the golden key to achieving 3X for All and an Opportunity Culture, within budget. Extending the reach of top teachers to more children creates an economically sustainable cycle of excellence (Figure 3). Today's ambitious recruitment, retention, and dismissal strategies are much likelier to succeed if excellent teachers have significant opportunities for career and pay advancement that keep them in instructional roles.

Extending the reach of top teachers to more children, via job redesign, digital instruction, and time-saving tools, enables:

- **higher pay for career advancement** within instructional roles as top teachers teach more children effectively and get paid a higher portion of per-pupil funding flows;
- **increased retention** of excellent teachers due to better career opportunities and pay;
- **increased entry** of high-potential teachers due to better career opportunities and pay;

- **other teachers to contribute** to excellent student outcomes in new roles—tutoring, lecturing, or teaching smaller classes while top teachers have larger ones, for example;
- **replacement of the worst** teachers by new entrants and the extended reach of the best teachers; and
- **producing high-growth learning for all children, within budget for schools.**

Figure 3. Extending the Reach of Excellent Teachers Begins a Virtuous Cycle of Sustainable Excellence



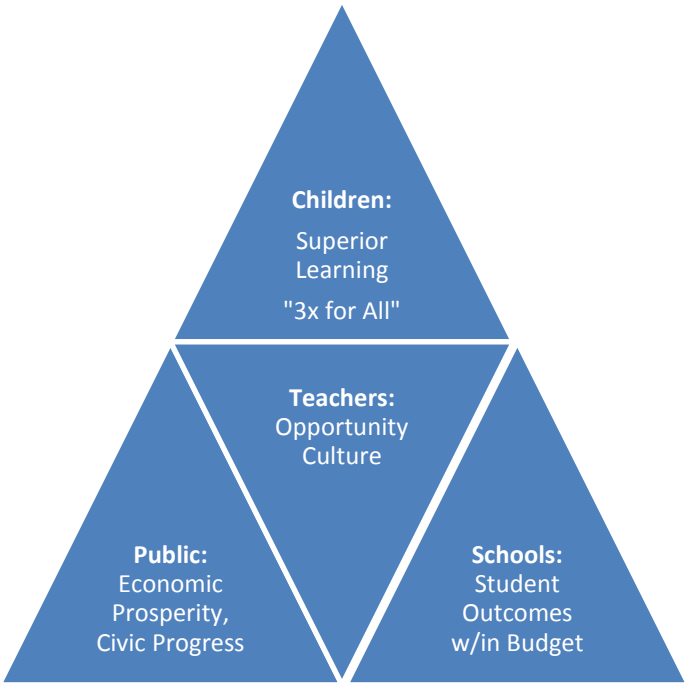
Excellent teachers and schools can share the economic benefits realized by reaching more students with *teachers who get the best student outcomes*. Schools, districts, and states that share more of the financial benefit with excellent teachers will become talent magnets, attracting and keeping more top teachers and infusing school cultures where those teachers work with their behavioral habits and standards of excellence. The public will benefit from better outcomes, within budget, as well as the increased economic and civic participation of citizens who are left out today.

Opportunity Culture Benefits

Education leaders who build an Opportunity Culture for teachers can achieve (Figure 4):

- **For Children**: Superior learning growth, nearly every year, for all students on par with what top-quartile teachers produce with children now.
- **For Schools**: Excellent student outcomes within budget, enabling schools to attract and retain more top teachers as they split the economic benefit with top performers.
- **For the Public**: Economic prosperity and civic progress driven by a financially sustainable, high-performing education sector.

Figure 4: An Opportunity Culture for Teachers Benefits Children, Schools, and the Public



What an Opportunity Culture Means for All Teachers

Excellent Teachers: The main benefits of reach extension for star teachers are enhanced opportunities to help more children and to earn pay commensurate with these contributions. But significant collateral benefits may accrue to top teachers, as well. For example, many forms of reach extension will further magnify top teachers' effects by enabling them to focus their time on students' learning needs and the aspects of instruction in which each teacher excels. Teachers who achieve top results in typical classrooms, doing the myriad of tasks that classroom-based teachers do with a wide range of children, may significantly magnify their learning effects by shifting all of their time to the instructional steps and children with which each achieves the best results.[10] Some excellent teachers may be able to reach more children, receive more pay, and produce even better learning results—two or more years of growth per year, rather than just a year and a half—crucial for students who need to make big learning gains fast.

This is an entirely different way of looking at teaching, one that questions the wisdom of all teachers—including the worst—owning their own classrooms. 3X for All thinking changes this paradigm: Classroom ownership, and the ultimate responsibility for children's learning that it affords, should be a *privilege* for the best. Ironically, today's nearly universal one-teacher-one-classroom structure guarantees a sub-premium learning experience for the vast majority of children every single year.

In an Opportunity Culture, excellent teachers will gain far more power over education practices, policies and cultural attitudes:

- For example, an excellent teacher managing in-person, remote, and digital contributions to her students' learning (including instruction she provides) will focus **professional development** for her team members on what her tutors, lecturers, lab monitors, and other supporting teachers need at each juncture to ensure positive student outcomes.

- If empowered, she will choose **materials** and **digital tools** to meet her students' needs, driving lower-quality instructional tools out of the system by choosing better alternatives. Technology will increasingly help her with some tasks she does to personalize instruction today, such as diagnosing student needs, matching instruction to individual needs, and grouping children for tutoring and projects. But the excellent teacher is the one who will still notice and solve the problem when a child is stalled, despite the child's access to good materials and technology, just a she does today. Purchasing power in the hands of consistently excellent teachers—and captured data about the choices they make for students—can accelerate improvement of digital learning tools.

- When **tenure** becomes more exclusive, as it surely must,[11] excellent teachers who have a stake in protecting the status that tenure should afford will make the best decisions about who should join their ranks.

Other examples abound. Possibly most important, empowering teachers who achieve excellent outcomes *despite* challenging working conditions will change the way other educators view their work.

Solid Teachers: The one-teacher-one-classroom role, which requires a large combination of skills and competencies, leaves many teachers feeling overwhelmed and unable to produce excellent learning outcomes. For most people, hope springs eternal. But solid teachers who work hard to become excellent in this complex role have little to hope for should they improve enough. Meanwhile, many of these professionals are undoubtedly excellent in some of the roles imbedded in today's teaching job. If solid teachers were able to focus on their strengths—such as small-group tutor, lecturer, or coach-motivator—and were subject to the magnetic pull of excellent teachers' determination and high standards, many could be part of teams delivering excellent student outcomes.

Lagging Teachers: Over time, the need for the lowest contributors will decline as the best teachers serve a higher proportion of students. Eliminating these peers from teacher ranks will raise the profile of the profession and diminish the extra work better teachers do to make up for children's low-growth learning years.

With all these changes in teacher roles, one element must remain: **An excellent teacher must still be accountable for each child's learning.**

Practice and Policy Options for Building an Opportunity Culture

To create an Opportunity Culture in K–12 education, education leaders need new management practices, enabled by new policies. In an Opportunity Culture, education leaders first must commit to:

- reaching the most children possible with high-growth learning (the 3X for All commitment), and
- supporting and rewarding the top teachers whose reach is extended.

Many schools could implement the simplest forms of reach extension—such as small shifts in class size from the least to the most effective teachers in schools—without major changes in school management or state policies, benefitting some children directly and immediately.

But sustainable, universal reach extension that benefits all children will require substantial changes, so educators can avoid inhibiting any step in the implementation of an Opportunity Culture. Figure 5 details many of the management practices that affect that implementation.

Figure 5: Management Elements that Affect Opportunity Culture Implementation

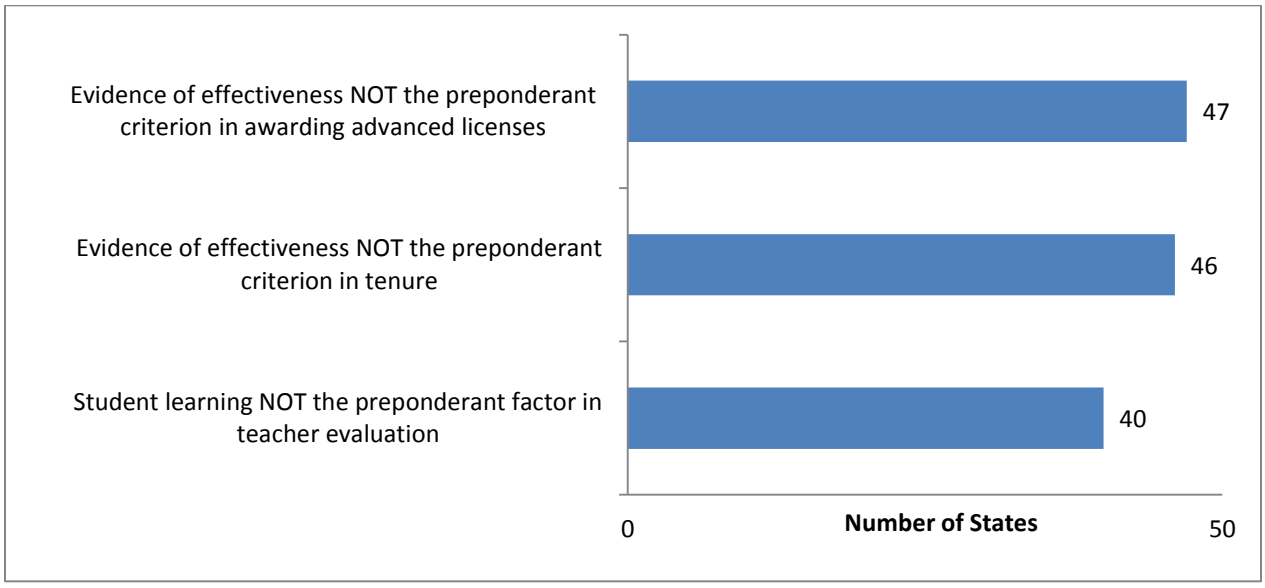
Organization and Job Design	Human Resource Systems	Supporting Systems	Instructional Systems
Staff roles School design School processes Leadership	***Before Teaching:*** Recruiting Hiring Pre-teaching training Placement ***While Teaching:*** Induction Teacher evaluation Compensation Benefits Professional development Career advancement Tenure Retention efforts ***Post-Teaching:*** Dismissal Layoffs	School budgets Facilities and classroom design Time-saving technology Union arrangement to make elements possible	Student growth data Diagnostic tools Instructional matching tools Instructional materials Instructional technology
See forthcoming work from Public Impact explaining how each element can support an Opportunity Culture and be designed to extend the reach of excellent teachers, available at www.opportunityculture.org.			

School providers with the management reins firmly in their hands—such as charter schools and district turnaround-attempt schools that have been granted significant autonomy—may be free to pursue changes faster. For those providers, plus providers in states that move rapidly to create policies friendlier to top teachers, knowing which management practices to change is critical.

For most, however, knowing how to reorganize schools will not be enough: State policies must ease the constraints on school management. As authors from the National Council on Teacher Quality wrote in 2008, "on the most critical issues of the teaching profession, the state is the real powerhouse. State law dictates how often teachers must be evaluated, when teachers can earn tenure, the benefits they'll receive, and even the rules for firing a teacher."[12]

States are the "powerhouses" because the U.S. has left much education policy in their hands, to honor states' rights and let each jurisdiction tailor policies to its own needs. Despite that leeway, state legislators across the country have crafted a remarkably uniform set of policies (Figure 6), most of which keep the best teachers from reaching more children for more pay. This has begun to change in a handful of states, but with few exceptions the forward movement is piecemeal, slow, and too small to achieve the goal of excellent teachers for every child, every year.

Figure 6. Uniform *and* Abysmal: In 2010, Most States Had Similarly Inadequate Teacher Policies, Despite "States' Rights"



Source: National Council on Teacher Quality. (2010). *Blueprint for change: 2010 state teacher policy yearbook: National summary.* Washington, DC: Author, p.4. Retrieved from http://www.nctq.org/stpy09/updates/docs/stpy_national.pdf. Does not reflect any policy changes in 2011.

Numerous analysts have catalogued the pathologies in current state teacher policies and suggested new policy directions.[13] Rather than repeat that full analysis, we identify here and in Figure 7 on page 18 the high-priority changes needed in management practices and related state policies, focusing on identifying excellent teachers and clearing the barriers that keep them from reaching more students. An overarching theme is that districts, schools, and the top teachers who are accountable for children's learning must be able to choose, use, and change roles, technology budgets, and other resources to reach the most children possible with excellent instruction. The first states to adopt these ideas would have the potential to become

magnets for top teaching talent—and suppliers of that talent to other states—while reaching far more children with the excellent teachers they already have.

Here are the highest priority changes needed, and the actions policymakers can take to enable each of them:

- **Identify 3X teachers**. To extend 3X teachers' reach, schools first must know who those excellent teachers are. States, districts, and charter management organizations are in the midst of developing complex systems to assess teacher performance using multiple measures. For making fine-grained distinctions among teachers in the middle of the performance distribution, or for making legally defensible decisions about dismissal, elaborate systems may be needed. But while these systems may take years to enact fully, leaders eager to extend the reach of *excellent* teachers need not wait. School leaders, teachers, parents, and even students tend to know who the top teachers are. Schools committed to giving more students access to excellent teachers could do so now, while the formal systems catch up. In addition, schools also need to get smart about predicting 3X teachers' success in different kinds of reach-extended roles. Not all top teachers will be great under every form of reach extension. See the box "Teacher Competencies" on page 17 for more.

  What can policymakers do? Enact policies that:
  - *Require districts to identify their top-25 percent teachers* using multiple measures, including student learning growth as the main element. Untested grades and subjects in which policymakers want children to make strong progress will need alternative growth measures.
  - *Invest state funds to identify alternative measures of performance*—such as behavioral competencies—that correlate highly with student growth and with success in traditional and new teaching roles.[14] These will aid in identification of excellent teachers, appropriate promotion into new reach-extended roles, and development of all teachers.

- **Redesign organizations and jobs for reach**. *School design* needs to shift from the uniform one-teacher-one-classroom set-up to varying designs that maximize learning impact from combinations of available excellent in-person teachers, other staff, and digital instruction. Class and group sizes should be based on the effectiveness of available staff and technology with students in different size groups. *School processes*, including student schedules, teacher schedules, and other protocols and routines, should be designed for reaching every child with high-growth, individually appropriate instruction, in person or via technology, for enough time each day and throughout the year. *Staff roles* must be designed to optimize the number of children reached successfully by the best available instructor or instruction—whether in-person, digital, or combined. Every student needs an adult who is accountable for her learning in each

subject. The accountable adult must be able to choose the right combination of in-person and digital instruction for each child.

What can policymakers do? Enact policies that:

- *Provide state funding for schools as fungible lump sums*, including funding for teacher pay. This will allow schools to pay for the best combination of teaching roles and technology.
- *Eliminate class-size limits for excellent teachers*; or require average class-size limits across districts or schools, rather than absolute limits per classroom. This lets willing, top teachers take more kids.
- *Eliminate or reduce "seat time" requirements for students to be with licensed staff*, focusing on student outcomes instead. This will allow, for example, unlicensed staff to monitor digital labs, freeing funds to pay more—within budget—to the excellent teachers in charge.
- *Revise licensure rules to make excellent out-of-state teachers automatically eligible to teach*. This will let excellent remote teachers, with supportive local staff, reach children who cannot have excellent in-person instructors.[15]

- **Pay excellent teachers more for reaching more students with excellence.** Today, statewide salary scales require pay to be based almost entirely on experience ("steps") and degrees earned ("lanes"); some policies leave discretion to school providers, but those providers generally implement similar scales. Absent temporary or private funding, these scales prevent paying more to teachers whose students learn more and who reach more students. Think of a teacher's compensation as a portion of the per-pupil funding her students generate for her school. If a teacher reaches more students, more funds are effectively available to pay her. Schools intent on extending their 3X teachers' reach should find ways to share this economic benefit with those teachers by increasing their pay commensurately with their expanded reach—provided they continue to achieve excellent results.

  What can policymakers do? Enact policies that:

  - *Eliminate statewide salary scales*, leaving districts and schools free to pay excellent teachers more for reaching more students, within available budgets.
  - *Implement state-level incentives* for schools and districts that both reach more students with excellent teaching and share rewards with those teachers.

- **Proactively retain top teachers and offer diverse career advancement options** for all staff. Extending 3X teachers' reach and paying them more should help keep significantly more top teachers in the classroom. Schools struggle in part to keep their best teachers in the classroom because of a lack of advancement opportunities other than becoming an administrator. Instead, along with clarifying roles for other teachers and support staff, schools should: offer numerous career paths for high-growth teachers to reach

more children; ensure they are offering ever-challenging work roles; group high performers together; offer further development opportunities linked to new roles even though these teachers are "already excellent"; and undertake intensive, tailored efforts to keep specific teachers who consider leaving.[16] Additionally, schools have trouble keeping the best teachers because of layoff policies—during hard times, many states require that layoffs be based entirely on seniority, preventing schools from retaining excellent but less-experienced teachers,[17] and because of policies that grant tenure to almost all who seek it, tying up resources in pay for less-effective teachers.[18]

What can policymakers do? Along with the policies above on salary scales and incentives, enact policies that:

- *Grant absolute protection during layoffs to excellent teachers*, regardless of seniority. For example, apply this to teachers with the top-25 percent results for two of the past three years OR the most recent year.
- *Give schools and districts full flexibility to establish (and pay for) advanced roles*.
- *Make tenure meaningful via "elite tenure,"* offered only to consistent top performers who then can be empowered to choose their peers.[19]

- **Build instructional and data systems** that enable excellent-teacher reach. Mushrooming technology has enormous potential to enable reach extension in two primary ways.[20] First, digital tools can free top teachers' time so that they can reach more students, live and in person. Software can increasingly undertake rote administrative tasks, carry out basic skills instruction, provide real-time data to teachers, and even mimic elements of what top teachers do—tracking student progress, identifying student needs, and matching needs to instructional content levels and methods. The more 3X teachers can use digital tools to carry out these responsibilities**, the more students they will be able to reach without increasing work hours.** Second, online courses and remote instruction make it increasingly possible for students to have access to excellent teaching even if their schools cannot employ an excellent in-person teacher in a given grade or subject. Schools eager to give more students top teachers should move to employ these tools aggressively, but always with an accountable adult responsible for each student's learning in each subject. Many states are making progress on instructional and data systems. However, broadband access—especially outside of school—varies widely by geography and family income. States need to remove this barrier to online instruction, which disproportionately affects their poorest children.

  What can policymakers do? Enact policies that:

  - *Invest in universal wireless broadband access* for all school-age children.
  - *Invest in data and instructional information systems to monitor student progress and customize instruction for students.*

Teacher Competencies:
The Science of Measuring the "Secret Sauce"

Despite an astonishing collective sum spent on teacher performance measurement in the U.S., no major initiative has done what Singapore did a decade ago: identify behavioral competencies that statistically distinguish top teachers from others.

Using well-honed methodologies, researchers can identify and correlate behavioral competencies—habitual patterns of thinking and action—that distinguish the best performers from the rest. Researchers also can identify levels of behaviors within each competency that are increasingly correlated with desired outcomes.[21] In K–12 education, it is entirely within reach to have a set of statistically valid and clearly communicated behaviors that help teachers produce positive student outcomes in measured subjects. Once identified, these competencies also may be used to select, develop, measure, and promote people in similar roles—for example, similar subjects and grades that lack quantified test results or other measured student outcomes.

Just as important, teachers and their managers will be better able to select appropriate reach extension modes if they know the relative competency strengths and weaknesses among top teachers. Some can be profiled early as **super-instructors**, fabulously engaging conveyers of expert knowledge to large groups and via visual media. Others will be terrific **developers**, able to motivate students best in personalized, small-group settings enabling interpersonal engagement. Still others will be strong **teacher-managers**, able to lead several classrooms of other teachers, ensuring that they consistently meet the teacher-manager's standard of excellence. Others will be **student behavior managers** extraordinaire, able to lead larger classrooms of students while keeping everyone focused on learning. And so on. With accurate identification of competencies that predict successes in these reach-extended roles, excellent teachers will be able to build on their most outstanding strengths to reach even more children with similar, high-progress learning. Likewise, good-but-not-great teachers who enter new, focused roles that match their competency profiles may become excellent contributors to student outcomes.

For more, see Public Impact's reports on the use of teacher competencies in Singapore and the wider use of competency measures in organizations across sectors. Steiner, L. (2010). *Using competency-based evaluation to drive teacher excellence: Lessons from Singapore.* Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/singapore_lessons-public-impact.pdf; Kowal, J., & Hassel, E. A. (2010). *Measuring teacher and leader performance: Cross-sector lessons for excellent evaluations.* Chapel Hill, NC: Public Impact. Retrieved from http://www.publicimpact.com/images/stories/performance_measurement_2010.pdf

Figure 7: Current Policy and Opportunity Culture Alternatives[22]

Management Imperative	Current Policy in Most States	Opportunity Culture State Policy Alternatives
Identify 3X teachers	A few vanguard states are beginning to overcome "the widget effect," [23] building systems with real differentiation and a strong basis in student results, but these will be years in the making. Even leading systems typically give each teacher a single effectiveness rating, despite the multifaceted nature of the teaching role. As states revamp evaluation systems, they may lock in new systems for years, or even decades, that do not enable job redesign for teachers and integration of technology.	Prioritize identification of top-25 percent teachers, even if more time is needed to develop legally defensible systems to dismiss low performers. Identify elements of the teaching role and subjects in which different people excel, and competencies that correlate with these. Alone or in collaboration with other states, validate and improve competency and observation models with large-scale data.
Redesign organizations and jobs for reach	Rigid budget categories, across-the-board class-size limits, "seat time" requirements, and mandated use of licensed staff inhibit using the optimal mix of staff members and technology, even if decided by proven top teachers. State-specific certification/licensure rules limit ability of teachers—including excellent ones—to teach across state lines.	Make state funding—including funding for teacher pay—fungible lump sums. Eliminate class-size limits for consistent top teachers; or require average class-size limits across districts or schools, rather than absolute limits per classroom. Eliminate or reduce "seat time" requirements for students to be with licensed staff, focusing on student outcomes instead. Revise licensure rules to make excellent teachers from other states automatically eligible to teach.
Pay excellent teachers more	Statewide salary scales require pay to be based almost entirely on experience ("steps") and degrees earned ("lanes"); some policies leave discretion to school providers, which largely implement similar scales. These policies prevent paying more to teachers whose students learn more and who reach more students.	Eliminate statewide salary scales, leaving districts and schools free to pay 3X teachers more for reaching more students, within available budgets. Implement state-level incentives for schools and districts that both reach more students with excellent teaching and share rewards with those teachers.

Figure 7: Current Policy and Opportunity Culture Alternatives (continued from page 18)

Management Imperative	Current Policy in Most States	Opportunity Culture State Policy Alternatives
Proactively retain top teachers and offer diverse career advancement options	During hard times, many states require layoffs to be based entirely on seniority, preventing schools from retaining excellent but inexperienced teachers. Leaders have little discretion to use pay to keep the best teachers. Few opportunities for advancement other than becoming an administrator. Tenure granted to almost all who seek it, tying up resources in pay for less-effective teachers	Grant absolute protection to top teachers during layoffs regardless of seniority; e.g., teachers with top-25 percent results for two of the past three years OR the most recent year. See "Pay excellent teachers more" row, above. Give schools and districts full flexibility to establish (and pay for) advanced roles. Make tenure meaningful via "elite tenure," offered only to consistent top performers.
Build instructional and data systems	Broadband access—especially outside of school—varies widely by geography and family income. Many states are making significant progress on instructional and data systems.	Invest in universal wireless broadband access for all school-age children (see sidebar, "Universal, Wireless Broadband Access for Every K–12 Child in the U.S." on page 20). Invest in data and instructional information systems to monitor student progress and customize instruction for students.

Putting Power in the Hands of Those with the Will to Achieve Excellent Outcomes

As a nation, we have tried over the past few decades to spur states, districts, and schools to do better. Some of this pressure has come from the federal government. Congress has required states to assess and report children's progress toward state standards, and take action when schools fall short. National policymakers have also embedded incentives in numerous funding streams for states, districts, and schools to pursue a wide range of seemingly desirable policies and practices. For their part, some states have adopted similar policies to incite districts and schools to improve. Each has created its own accountability system to measure and report progress and trigger intervention when schools fail to improve enough. States have expanded school choice, largely through public charter schools, in part to put more competitive pressure on traditional schools and districts to get better. Meanwhile, districts and schools have enhanced professional development, integrating peer-enhanced improvement into teachers' work with students.

Universal, Wireless Broadband Access for Every K–12 Child in the U.S.

Vastly increasing wireless broadband access to reach every student in America would remove a barrier that disproportionately affects the poorest children. While it might be expensive, not ensuring access to online instruction may prove equally expensive. The estimated cost of closing the "broadband availability gap" is $24 billion.[24] That's a significant sum, but consider that McKinsey & Company's estimate of the annual drag on the nation's gross domestic product of the achievement gap between low-income students and others is between *$400 and $670 billion*.[25] Poor and low-income children disproportionately populate schools with few excellent teachers, and reaching them with top-tier instruction will require significant use of technology. Wired broadband is reliable, but it limits at-home access and at school requires renovating physical facilities, thus restricting digital learning and teaching tools to inconvenient, limited locations in older and poorer schools.

Providing fundamentals for free is not new: anyone crossing the border into this country has access to free, clean drinking water in public facilities. High-speed internet will be the water of learning, particularly as the content quality improves, replacing textbooks and speeding up the diagnostic and instructional "prescription" steps that top teachers take.

To provide every child equal access to the best available packages of instruction, every K–12 child needs wireless broadband access, wherever they are, as do the adults responsible for their educations—namely, parents and teachers.[26] Differentiating their free access from paid access of other adults is simply a matter of technical design and organization (much like for-fee water in private locations). We are certain that private providers contracting with the government can tackle this challenge.

Yet all of these pressures and supports collectively have not generated the kind of will and culture of excellence needed to reach every child with excellent teachers. At this point in history, we can say with near certainty that continued attempts to tinker with individual state policies and school practices without a compelling, larger goal will take too long, and changes will prove politically thorny. We need to consider ways to *inject substantially more will and drive to achieve student success* into policymakers' and practitioners' efforts.

Catalyzing national will is, of course, a daunting challenge. Some believe that federal power already extends too far in education.[27] We argue, however, that giving up on a stronger national push for better outcomes is premature, especially given that other nations with substantially better results have proved much more willing to exert national power to get the job done.[28]

Instead of abandoning the quest for an effective national role, what we propose here is a search for ways to catalyze state and national will that fits with deeply rooted American traditions: **empowering the people** to pursue remedies when their government is not delivering results, and **imbuing systems with financial incentives** to pursue excellence.

Rather than national micromanaging of schools, these approaches put power and opportunity in the hands of people compelled to act in the interests of children and our nation. Moreover, our capitalist democracy demands solutions that are economically appealing to excellent educators and the technology providers who can help leverage their time and talent.

Other nations making educational surges have used top-down, national mandates to limit who can teach. States could follow the lead of these nations by, for example, allowing only top-tier high school graduates to become teaching candidates. But this alone would likely not be adequate to reach every child with an excellent teacher in our economy, absent other changes that would make the teaching profession an attractive long-term career for more top candidates.

In this section, therefore, we discuss two high-potential options for creating more will to reach every child with an excellent teacher. Each of these could take multiple forms, and we hope that others will contribute to developing them.

1. **Declare a new civil right: access to excellent teachers**.
   Legislate a new federal or state civil right to excellent teachers, enforce existing civil rights laws with an excellent-teacher remedy, or provide federal incentives for state-level rights: For any child who did not make grade level in the previous school year, who did not make at least a year's worth of growth in any designated subject in the previous school year, or who has not been assigned an excellent teacher in a designated subject during the prior two school years, policymakers should require schools and districts to put a consistently excellent teacher in charge of that student's instruction. That teacher must be fully accountable for the child's learning outcomes, in person, online, or in combination. If schools and districts do not provide such a child with an excellent teacher, the child should be empowered to take legal action to enforce the right.
2. **Report and reward excellent teachers' reach.**
   Require reporting of the number of children in different categories reached by teachers of differing prior effectiveness, and pay more per pupil for achieving student growth as good as that produced by today's top-quartile teachers. Weight rewards to pay more for learning growth by disadvantaged children, up to and beyond basic proficiency.

The New Civil Right: Access to Excellent Teachers

Legislate a new federal or state civil right to excellent teachers, enforce existing civil rights laws with an excellent-teacher remedy, or provide federal incentives for state-level rights: For any child who did not make grade level in the previous school year, who did not make at least a year's worth of growth in any designated subject in the previous school year, or who has not been assigned an excellent teacher in a designated subject during the prior two school years, policymakers should require schools and districts to put a consistently excellent teacher in charge of that student's instruction. That teacher must be fully accountable for the child's

learning outcomes,[29] *in person, online, or in combination. If schools and districts do not provide such a child with an excellent teacher, the child should be empowered to take legal action to enforce the right.*

Why a New Civil Right?

Civil rights shift power from governments to the people: in this case, children, parents, and legal advocates who work in their interests. Civil rights also *obligate* the state or federal governments in which the rights rest to enforce them. That obligation provides a barrier from political games for politically contentious but morally—and in this case economically—important issues.

Previously defined education civil rights are based on various federal and state laws and constitutions. These rights and the remedies to enforce them have focused primarily on equality of access to schools regardless of race and disability, enabling that access through mandated busing, individualized education plan requirements for students with disabilities, and the ensuring of "adequate" levels of funding. Some courts have pressed more specific remedies such as requiring chronically failing schools to close if they do not make adequate gains.[30]

Yet major economic and racial achievement gaps remain within and among schools of all types. No civil right or remedy mandates the one thing that we know from research closes even the widest achievement gaps: excellent teachers for multiple, consecutive years.[31]

Key Design Issues

We do not attempt here to explore all of the legal intricacies of having a new civil right, but we do see at least four critical design issues:

- The **legal mechanisms** for declaring or enforcing a new civil right
- The actionable **triggers** for individual children whose rights are being violated
- The **remedies**
- The **operational implications** for schools to satisfy the right

Here, we briefly explore some possibilities for each of these design issues. We expect that a new breed of civil rights activists and others could contribute significantly to developing these.

Legal Mechanisms

We see three major options. The first is **legislative action** by the U.S. Congress. Federal legislators would have to exercise a level of leadership that state legislators have failed to exhibit in education policymaking. Some federal legislators may see this as intrusive, but a new civil right that entrusts power to children and parents is far less intrusive than trumping state policies directly, except as a remedy.

The second option is **executive action to enforce** existing civil rights laws with a specific remedy of access to excellent teachers in designated subjects. Existing civil rights affecting public education are currently enforced by the Office of Civil Rights within the U.S. Department of

Education.[32] This office could enforce modified standards for violation of the rights and a new remedy for those violations, per the dictates of an executive order. In short, the president of the United States would need to lead this charge, with support from the U.S. Department of Education. Federal courts would have to back this enforcement, because some districts inevitably would challenge it. In addition, an executive order would be subject to reversal by subsequent executive action. Finally, a potential limitation is that existing civil rights laws cover only students in "protected classes," such as race, sex, creed, and national origin. Though many students denied access to excellent teaching fall into these protected classes, not all do. Simply being from a low-income family, for example, does not entitle a child to current federal civil rights protections.

The third option at the **federal level** is **incentivizing similar state-level actions**, such as legislation establishing new rights or executive enforcement of existing state-level rights**.** The federal government could provide incentives that induce states to form a new civil right through legislative action; enforce existing state civil rights with a remedy of access to excellent teachers; measure teacher performance in meaningful ways; and incentivize district and school-level reach extension of top teachers to children. Incentives tie strings to federal dollars, requiring states to adopt certain policies to receive those funds.

Incentives for better teacher performance measurement and district- and school-organized reach extension could be part of federal ESEA re-authorization. For example, federal dollars could be tied to state plans to rate teachers in meaningful ways and to making specific plans for ensuring that all students have access to teachers who produce learning growth as good as today's top-quartile. Unless a large portion of federal education dollars are affected, this is likely to be the weakest mode.

Many states could achieve the new civil right using one of these three methods—a new civil right, altered enforcement of existing rights, or incentives to extend the reach of top teachers—without inducement by federal dollars. We challenge **governors and state legislators** to take action accordingly, potentially becoming early magnets for top teaching talent, and enjoying the economic and social benefits of better learning outcomes.

Triggers

Triggers are important, because they determine what is measured, how dollars flow, and which children benefit. The policy's goal should be to ensure that every child who is not meeting standards catches up to grade level within four years, without impeding progress above grade level. As a starting point for discussion, we propose that the right to a proven, high-growth teacher in the specified subjects could be triggered in the following school year for any K–12 student who: 1) **does not test at grade level** in math or language arts, or in science or social studies (in the years that these two subjects are tested); 2) **does not make at least a year's worth of growth** in any designated subject—the minimum standard necessary for success in almost any occupation or later schooling (note that a student may be working above grade level but could still use this trigger if he has not made at least a year's worth of growth**);** or 3) **has not**

been assigned an excellent teacher in a designated subject during the prior two school years (regardless of the student's performance).

Responsibility for ensuring that students already at or above standards still make at least a year's worth of growth encourages schools to extend teachers' reach and attract and retain more excellent teachers, not just move children among classrooms. Likewise, students and their parents should know that regardless of their performance, they will not go longer than two years without an excellent teacher.

Subjects should be tracked separately, so that a child not making enough learning growth in reading would trigger the right in reading, but not necessarily in math and other subjects in which the child is proficient and making progress. Policymakers would also need to decide whether to limit the trigger to certain subjects they deem most important for the economic and civic health of individuals or society.

Remedies

The remedy in simple terms is assignment to an accountable teacher with a track record of producing consistently high growth in the relevant trigger subject. If "high-growth" teachers were defined as those producing at least 1.5 years of progress on average per school year, schools effectively would be responsible for providing teachers and instruction that put even a child who was two years behind on track to proficiency within about four years,[33] not over a motivation-sapping 12 or 13 years.

The remedy teacher might teach remotely, in person, or using a combination of technology and in-person teaching. That teacher might be the student's only teacher of the given subject, or she may supervise and be accountable for other teachers and paraprofessionals who together deliver instruction to the student. As online learning becomes more effective, that "teacher" might look more like a "case manager," connecting the student with a variety of learning experiences that collectively enable her to excel.

Regardless, every student who is not making strong learning gains needs an adult with a top-tier track record—as a direct teacher or "case manager" of children's learning—who is *responsible* for ensuring that student's growth. That teacher would need the power to choose, manage, and change the team, materials, and digital instruction she uses to achieve high growth. As time goes by, some school providers and teacher-supply organizations might step in to help schools fulfill the right with a publicly-proven cadre of high-growth teachers.

Whatever the modes of teaching and the source of teachers, students become part of each remedy teacher's growth data. Thus, both schools and remedy teachers have a strong incentive to choose ways of reaching affected students successfully—without diluting teachers' student progress below the threshold of "high growth." In turn, high-growth teachers have an incentive to choose and use better technology and job designs to achieve their goals.

Though the right itself would not require any specific state policies, states would certainly have to change policies to fulfill the right, given that so many current policies would stand in the way of giving every child access to excellent teaching (see Figure 7 on page 18 for a list of those policies). The indirect pressure for policy change would be substantial, because districts and schools would find implementation of top-teacher reach extension difficult or unsustainable without such changes.

In the case of a federal right, federal enforcers could require states not complying to change specific aspects of state laws that prevent districts and schools from providing the remedy of access to excellent teachers. Or, in the cases of states with violations affecting a substantial proportion of children, federal enforcers could preempt relevant state education laws entirely.[34]

Operational Implications

Without digital instruction and job redesign to extend top-teacher reach, a civil right to excellent teachers would be impossible to implement or enforce at broad scale. Fortunately, both ingredients are at the fingertips of school providers today and will likely improve over time. The pace of new school models that extend the reach of top-growth-producing teachers is accelerating, and many more options will be obvious in coming years.[35]

Operational changes in schools will depend on their teacher and student populations. Schools with few top-tier teachers, such as many isolated, high-poverty schools, would need to combine digital instruction with the best available in-person teachers. Large portions of content instruction might need to be provided online, either by live teachers working remotely, video, or smart software (designed by or modeled on excellent teachers). On-site teachers might focus instead on the elements of teaching that, combined with superior core content instruction, produce higher learning growth for students, such as helping students organize their time and work space; tutoring; monitoring behavior; facilitating student projects; teaching other subjects; and guiding behavioral, social, and emotional development. High-growth teachers working on-site will need to change their roles: for example, specializing in certain subjects or teaching roles, eliminating nonessential duties, using digital instruction for the skill and knowledge portion of teaching, or leading multiple classrooms of teachers—all enabling large increases in the number of students reached without increasing class size substantially.

In schools with a typical distribution of teachers, in-person reach extension would need to focus on the children not making needed progress without consistent access to excellent teachers. Schools with fewer top-tier teachers overall may need additional instruction online in subjects without enough in-person instructional masters. Many options for extending the reach of the on-site teachers are possible (forthcoming work from Public Impact and partner organizations will provide more examples of this[36]). Some suburban and some urban, diverse schools may be able to meet the demands of such a right with in-person reach extension alone, but many will find their way to successful blended models for budgetary reasons and to broaden curriculum offerings.

Some schools with unusually large populations of excellent teachers could immediately reach all children in-person with these teachers, with no new technology, by changing staff roles to focus high-growth teachers' time exclusively on instruction in prioritized subjects.

How to Ruin a New Civil Right

A new civil right would not be without pitfalls. Here are some we anticipate, so that policymakers may plan ahead to avoid them.

- **Failure to implement teacher evaluation systems that include student learning growth—or correlated proxies—as a large enough component of "effectiveness."** States, districts, and other providers that compromise this will find themselves extending the reach of teachers who do not produce the learning growth demanded by the civil right. Measuring learning growth where possible, and correlating it to other more broadly applicable measures such as teacher competencies, is essential for identifying teachers in untested grades and subjects. Over time, implementing good assessments in all subjects covered by the right will minimize this concern. The more schools measure, the better and more useful measurement will become.
- **Failure to anticipate and counteract incentives to lower the bar** for what constitutes "excellent teachers" and a "year's worth" of learning growth. Lowering the teacher bar will result in remedy-induced instruction that is not good enough to produce high-growth student learning. Lowering the growth bar will mean children who need better teaching do not receive it.
- **Treating teacher "effectiveness" monolithically**. Although a small percentage of teachers produce extreme progress with children of all kinds and across subjects, many teachers may produce their "personal best" results with a narrower range of students, subjects, and instructional roles.[37] As the role of teachers becomes less uniform, measuring outcomes and correlating them with competency measures will help education leaders extend the reach of the right teachers into the right roles (see Teacher Competencies: The Science of Measuring the "Secret Sauce," page 17).

Report and Reward Excellent Teachers' Reach

Require reporting of the number of children in different categories reached by teachers of differing prior effectiveness, and pay more per pupil for achieving student growth as good as that produced by today's top-quartile teachers. Weight rewards to pay more for learning growth by disadvantaged children, up to and beyond basic proficiency.

To build an opportunity culture for top teachers and to reach every child with instruction as good as theirs, we must have a new formula for teacher success: **Teacher Success = *Effectiveness* X *Children Reached***. Effectiveness = how much a teacher's students learn, at a minimum measured in student growth. Reach = how many students receive instruction delivered or directed by the teacher. We need to know not just the number of excellent teachers a school has; the critical figure is the number of students they reach successfully. Federal and state policy could induce districts and schools to use this new formula both by changing teacher-quality *reporting* requirements and by *rewarding* successful reach extension financially.

Reporting

At the federal level, states are now required to report the percentage of teachers who are "highly qualified teachers," or HQTs. Calls to change this provision have arisen across the political spectrum because the HQT language focuses too much attention on teachers' formal credentials, rather than their effectiveness in the classroom.[38]

But just shifting to a requirement that states report the percentage of teachers who are "effective" or "highly effective" will not do enough to induce states, districts, and schools to focus on reaching as many students as possible with top teachers. In addition to requiring states to report the percentage of *teachers* in different effectiveness categories, federal law should require states to report the percentage of *students reached* by those teachers, disaggregated by district, school, and the usual student groups. These teachers must be the ones who deliver or direct instruction, the adults who are fully accountable for each child's outcomes.

Why focus the reporting on the percentage of students reached? Consider two districts, both of which make good progress in recruiting and retaining excellent teachers. Both of them boost their percentage of teachers deemed "highly effective" from a baseline of 25 percent to an impressive 40 percent. The first district now reaches 40 percent of students with high-growth instruction. But the second district also redesigns roles and employs technology so that its 40 percent cadre of highly effective teachers reaches 80 percent of the district's students. If the reporting system requires a report only of the percentage of *teachers* who are highly effective, these two districts look the same. Only a requirement to report the percentage of *students* reached by highly effective teachers illuminates the second district's significant, transformative edge. Without such data, other districts will wonder, "Do they just have easier students, more great teachers, or better professional development?" when in fact job redesign and technology to leverage teaching talent matters most.

Even without federal inducement, states should elicit similar reports from districts and schools to shed light on how well different schools reach students with excellent teaching, in person, online, or combined.

Rewarding

Reporting data transparently can help create the will to give more students access to excellent teachers. Providing financial rewards to districts and schools that succeed would be an even more powerful inducement. Ideally, this kind of reward would be woven into the fabric of state school finance systems. States could make a portion of per-pupil funding flow to schools and districts based on achieving learning growth—at least on a four-year catch-up trajectory for students who start behind, and a year of growth for others starting at or above standards. They could pay even more for such growth—up to and beyond basic proficiency— by students who typically fare poorly in schools, such as low-income students, students learning English, and students with disabilities. Schools and districts that successfully raised student performance

would have an incentive to share the wealth with the teachers who produce the gains, to retain them and entice other high-potential teachers to come onboard.

Federal policy could require this sort of reward system as a condition for funding, or allocate federal dollars in part based on success. But federal dollars represent a small portion of overall education funding. Even if 10 percent or more were tied to growth and proficiency, the dollars at stake might be too small either to force changes in utilization of the best teachers or to induce more achievement-driven educators to join the sector. Ultimately, it is state policymakers who have the power to induce widespread change by rewarding schools, districts, and top teachers for getting the job done with students.

Conclusion

Extending the reach of our nation's best teachers combined with related Opportunity Culture reforms could enable our schools to reach nearly every child, every year with excellent teachers—within budget. The consequence for children, excellent teachers, and our national economy would be unparalleled.

Our nation, states, and many districts are facing financial crises, and yet, as others have written, the financial cost of our educational shortfall is tremendous. The moral cost is just as high. Our nation cannot possibly be "the land of opportunity" nor have broad civic participation without major change. We firmly believe that reaching more children with the best teachers, within budget, is not only possible, it is essential for keeping our nation great economically.

Instead of focusing on all the factors—hard policy and soft culture—that got us here, we can turn the conversation to how our schools can become an Opportunity Culture—and why they must. As a first step, we must generate far more will to succeed: access to excellent teachers must become a right, not a privilege of the lucky few.

Unimaginable in prior decades, job redesign combined with technology make a right to excellent teaching possible today. Yet in the international learning race, the U.S. is bickering over how to pack our saddle bags while other nations board helicopters. Instead of continuing to deny our collective ambitions, our nation must recognize the excellent teachers already at work in America's schools. They have already shown us what excellence is and, despite the challenges, that *all* of our nation's children can achieve it. We must help them reach far more children.

ENDNOTES

[1] To reach this approximation, we looked at numerous studies of teacher effectiveness. Study results vary, but the top 20 percent of teachers produce about three times the progress of bottom 20 percent teachers, and a poor or black child who has a top 25 percent teacher rather than a bottom 25 percent teacher four years in a row will close the achievement gap with non-poor and white peers. Sources include: Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement.* Knoxville: University of Tennessee Value-Added Research and Assessment Center; Kane, T., Rockoff, J. E., & Staiger, D. O. (2006). *What does certification tell us about teacher effectiveness?* Retrieved from http://www.dartmouth.edu/~dstaiger/Papers/nyc20fellows20march202006.pdf; Gordon, R., Kane, T., & Staiger, D. O. (2006). *Identifying teacher performance on the job.* Washington, DC: The Brookings Institution. Retrieved from http://www.brookings.edu/views/papers/200604hamilton_1.pdf

[2] Stanford economist Eric Hanushek has found that teachers at the 84th percentile achieve average student gains equal to about 1.5 years worth of progress. See Hanushek, E. (1992, February.) The trade-off between child quantity and quality. *Journal of Political Economy*, *100*(1), pp. 84–117. Based on this estimate, the number of years a child needs to catch up equals the number of years behind divided by .5. Thus, 2 years behind divided by .5 equals 4 years. This formula is an approximation, and a teacher at the 75th percentile produces less progress on average than one at the 85th or 95th. Which of these teachers a child has each year will affect the actual catch-up time.

[3] Gordon, Kane, & Staiger. (2006), p. 8.

[4] Figure originally appeared as Figure A in Hassel, B. C., & Hassel, E. A. (2010). *Opportunity at the top: How America's best teachers close the gaps, raise the bar, and keep our nation great: Executive summary*. Chapel Hill, NC: Public Impact, p. 1. Retrieved from http://opportunityculture.org/images/stories/opportunity_execsum_web.pdf. See that publication, note 6, for an explanation of the data and calculations underlying this figure.

[5] Hassel, B. C., & Hassel, E. A. *Opportunity at the top: How America's best teachers could close the gaps, raise the bar, and keep our nation great*. (2010). Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/opportunity_at_the_top-public_impact.pdf

[6] Hassel, E. A., & Hassel, B. C. (2009). *3X for all: Extending the reach of education's best.* Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/3x_for_all-public_impact.pdf

[7] For more on ways that technology could change education, see Christensen, C., Johnson, C. W., & Horn, M. B. (2008). *Disrupting class: How disruptive innovation will change the way the world learns.* New York: McGraw-Hill; see also Dillon, E., & Tucker, B. (2011). Lessons for online learning. *Education Next, 11*(2). Retrieved from http://educationnext.org/lessons-for-online-learning/; and Vander Ark, T. (2011, July 11). 10 reasons teachers love blended learning. *edReformer.* Retrieved from http://www.edreformer.com/10-reasons-teachers-love-blended-learning/. For more on digital instruction policy, see Foundation for Excellence in Education. (2010, December 1). *Digital learning now!* Tallahassee, FL: Author. Retrieved from http://www.excelined.org/Docs/Digital%20Learning%20Now%20Report%20FINAL.pdf

[8] Forthcoming work by Public Impact and our partners will explore and explain the wide variety of options for extending top-teachers' reach to more students in all three modes and combined—while optimizing personalization of learning and maintaining the personal connections children need for developing strong habits of learning, problem solving, and working well with others.

[9] The number of students served is likely to increase as time passes, because of population growth. For an explanation of these calculations, see Hassel & Hassel. (2010). *Opportunity at the top.* That report projected the payoff of the different strategies shown in the figure for giving more children access to excellent teachers. Those strategies include our current, boldest policy goals of recruitment and dismissal: increasing the proportion of excellent teachers we attract each year from about 25 percent to 40 percent, which in practical terms means recruiting 50,000 more new teachers each year who end up in the top 25 percent, and tripling the percentage of teachers dismissed for low performance each year from 2.1 percent to 6.3 percent; and our emerging policy goals aimed at retaining the excellent teachers we already have, to cut the annual loss of them in half, and at extending

top-teacher instruction to more children, doubling the average number of children reached by each excellent teacher.

[10] On the potential value of changing roles for teachers, see various writings of Frederick M. Hess, especially: How to get the teachers we want. *Education Next* (2009, summer), 35–39. Retrieved from http://educationnext.org/how-to-get-the-teachers-we-want/; and Hess, F. M., Gunn, G. M., & Meeks, O. M. (2011, May 11). How to improve teacher quality? Treat teachers as individuals. *Education Week.* Retrieved from http://www.edweek.org/ew/articles/2011/05/11/30hess_ep.h30.html

[11] Public Impact. (2011). *Teacher tenure reform: Applying lessons from the civil service and higher education*. Chapel Hill, NC: Author. Retrieved from http://opportunityculture.org/images/stories/teacher_tenure_reform-public_impact.pdf

[12] Cohen, E., Walsh, K., & Biddle, R. (2008). *Invisible ink in collective bargaining: Why key issues are not addressed.* Washington, DC: National Council on Teacher Quality, p. 1.

[13] For example, see numerous reports by the New Teacher Project on teacher evaluation, hiring, placement, and other policies, available at http://tntp.org/publications/reports/; National Council on Teacher Quality. (2010). *2009 state policy yearbook (with 2010 updates).* Washington, DC: Author; Education Trust. (2009). *What states can do to improve teacher effectiveness.* Washington, DC: Author; Chait, R., & Miller, R. (2010). *Treating different teachers differently: How state policy should act on differences in teacher performance to improve teacher effectiveness and equity.* Washington, DC: Center for American Progress.

[14] For more on competencies, see Steiner, L. (2010). *Using competency-based evaluation to drive teacher excellence: Lessons from Singapore.* Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/singapore_lessons-public-impact.pdf; and Kowal, J., & Hassel, E. A. (2010). *Measuring teacher and leader performance: Cross-sector lessons for excellent evaluations.* Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/performance_measurement-public-impact.pdf

[15] In addition, changing licensure to enable rapid transition of highly capable professionals from other fields could increase the entry of teachers likely to produce excellent outcomes. For discussion of some licensure restrictions, see Center for American Progress, American Enterprise Institute, New Profit and Public Impact. (2009). *Stimulating excellence: Unleashing the power of innovation in education.* Retrieved from http://www.americanprogress.org/issues/2009/05/pdf/education_entrepreneurs.pdf; Smith, K., & Peterson, J. (2011). *Pull and push: Strengthening demand for innovation in education.* Bellwether Education Partners. Retrieved from http://bellwethereducation.org/wp-content/uploads/2011/09/pulll-and-push.pdf

[16] For a discussion of the cross-sector research about retaining top performers, see Ableidinger, J., & Kowal, J. (2010). *Shooting for stars: Cross-sector lessons for retaining high-performing educators.* Chapel Hill, NC: Public Impact. Retrieved from http://opportunityculture.org/images/stories/shooting_for_stars-public_impact.pdf. Reach extension has the potential to increase reach for more pay, or to maintain reach while reducing work hours for excellent teachers who would otherwise leave the classroom during early childrearing and other personally challenging times.

[17] Roza, M. (2009). *Seniority-based layoffs will exacerbate job loss in public education.* Seattle, WA: Center on Reinventing Public Education. Retrieved from http://www.crpe.org/cs/crpe/download/csr_files/rr_crpe_layoff_feb09_.pdf; The New Teacher Project. (2010). *A smarter teacher layoff system: How quality-based layoffs can help schools keep great teachers in tough economic times.* Brooklyn, NY: Author. Retrieved from http://tntp.org/files/TNTP_Smarter_Teacher_Layoffs_Mar10.pdf

[18] Public Impact. (2011). *Teacher tenure reform.*

[19] Public Impact. (2011). *Teacher tenure reform.* A discussion of "elite tenure" and an example of its design can be found on page 15 and in Table 3.

[20] Hassel, B. C., & Hassel, E. A. (2011, September 12). How digital learning can (and must) help excellent teachers reach more children. *Innosight Institute Education Blog.* Retrieved from http://www.innosightinstitute.org/education-blog/how-digital-learning-can-and-must-help-excellent-teachers-reach-more-children/

[21] Spencer, L., & Spencer, S. (1994). *Competence at work.* New York: John Wiley.

[22] Many of the policy alternatives recommended here have been proposed in other reports cited on the preceding pages.
[23] Weisberg, D., Sexton, S., Mulhern, J., & Keeling, D. (2007). *The widget effect: Our national failure to acknowledge and act on differences in teacher effectiveness.* New York: The New Teacher Project. Retrieved from http://widgeteffect.org/downloads/TheWidgetEffect.pdf
[24] Federal Communications Commission. *National broadband plan.* Chapter 8. Retrieved from http://www.broadband.gov/plan/8-availability
[25] McKinsey & Company. (2009). *The economic impact of the achievement gap in America's schools.* Retrieved from http://www.mckinsey.com/app_media/images/page_images/offices/socialsector/pdf/achievement_gap_report.pdf.
[26] Foundation for Excellence in Education. (2010).
[27] See for example the "manifesto" *Closing the door on innovation: Why one national curriculum is bad for America*. Retrieved from http://www.k12innovation.com
[28] Many studies have explored how nations with higher student outcomes differ from the U.S. in their policies and approaches. For example, see: Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company. Retrieved from http://www.mckinsey.com/App_Media/Reports/SSO/Worlds_School_Systems_Final.pdf; Tucker, M. S. *Standing on the shoulders of giants: An American agenda for education reform.* (2011). Washington, DC: National Center on Education and the Economy. Retrieved from http://www.ncee.org/wp-content/uploads/2011/05/Standing-on-the-Shoulders-of-Giants-An-American-Agenda-for-Education-Reform.pdf; Paine, S. L., & Schleicher, A. (2011). *What the U.S. can learn from the world's most successful education reform efforts.* New York: McGraw-Hill Research Foundation. Retrieved from http://www.mcgraw-hillresearchfoundation.org/wp-content/uploads/pisa-intl-competitiveness.pdf*;* Steiner. (2010). *Using competency-based evaluation.*
[29] Fully accountable such that the learning outcomes of the additional students are part of that teacher's performance record.
[30] Manning, Judge H. E., N.C. Superior Court. (2006, March 9). Letter to state officials: The high school problem—consequences. Retrieved from http://www.ncpublicschools.org/docs/newsroom/news/2005-06/manning-letter-030206.pdf
[31] At the state level, there has been limited movement toward policies aimed at guaranteeing students some degree of teaching effectiveness. Rhode Island, for example, has mandated that no student have an ineffective teacher for two years in a row (see Rhode Island Department of Education, Race to the Top website, at http://www.ride.ri.gov/commissioner/RaceToTheTop). This kind of policy is still rare, however, and is not nearly as stringent as one requiring an *excellent* teacher for students who are not making sufficient progress.
[32] Retrieved from http://www2.ed.gov/policy/rights/reg/ocr/index.html on March 24, 2011: "28 C.F.R. Part 35 is enforced by the U.S. Department of Justice. The U.S. Department of Education is designated by the U.S. Department of Justice to resolve complaints alleging noncompliance with this part against public elementary and secondary education systems and institutions, public institutions of higher education and vocational education (other than schools of medicine, dentistry, nursing, and other health-related schools), and public libraries. On September 15, 2010, the U.S. Department of Justice published a final rule revising the regulations implementing Titles II and III of the Americans with Disabilities Act (75 *Fed. Reg.* 56163). The amendments are effective on March 15, 2011."
[33] Students one year behind take about two years to catch up with consecutive teachers who produce 1.5 years of progress per year. Students two years behind take four years. Students further behind need one or more teachers who produce even more progress to catch up within four years.
[34] This option will become increasingly possible, from a constitutional perspective, as technology enables education to be delivered across state lines and thereby become subject to the Constitution's interstate commerce clause. In many other parts of the economy, Congress has used its power under this clause to override state legislation that impedes the flow of goods and services among states. In education, the policies we are discussing here will increasingly impede the flow of educational services, and specifically the extension of the talents of

excellent teachers, across state borders. In that context, Congress will have expanded constitutional basis to act decisively in eliminating barriers to giving every child access to excellent teaching.

[35] Public Impact is producing a series of top-teacher reach extension models with partner organizations. These will include existing reach extension models as well as new options. See www.opportunityculture.org/reach for the most recent models and tools for creating new models.

[36] See www.opportunityculture.org/reach.

[37] Hess. (2009). How to get the teachers we want; Hess, Gunn, & Meeks (2011). How to improve teacher quality?

[38] Center for American Progress and Education Trust. (2011). *Essential elements of teacher policy in ESEA: Effectiveness, fairness, and evaluation.* Washington, DC: Authors. Retrieved from http://www.americanprogress.org/issues/2011/02/pdf/esea_teacher_policy.pdf; Finn, C. E., & Petrilli, M. J. (2011). *ESEA briefing book.* Washington, DC: The Thomas B. Fordham Institute, pp.32–33. Retrieved from http://www.edexcellencemedia.net/publications/2011/20110419_ESEABriefingBook/20110419_ESEABriefingBook.pdf